

LTM9004 204LD 22mm X 15mm X 2.91mm (TABLE OF MATERIAL DECLARATION)

The LTM9004 is RoHS compliant per EU RoHS Directive 2003/95/EC.

It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

| No. | Part Name | Material Name | Component Weight (gram) | Materials Analysis (element) | CAS Number | Material Mass (gram) | Materials Analysis (weight %) |
|-----|--------------------|---------------|-------------------------|--------------------------------------|----------------------------|----------------------|-------------------------------|
| 1 | Substrate | Circuit Board | 0.43054 | Acrylic Resin | non-disclosure | 0.0092 | 2.13 |
| | | | | Phthalcyanine Blue, Organic Pigment | non-disclosure | 0.0001 | 0.02 |
| | | | | Barium Sulfate | 7727-43-7 | 0.0047 | 1.09 |
| | | | | Silica | 14808-60-7 | 0.0023 | 0.54 |
| | | | | Talc | non-disclosure | 0.0023 | 0.54 |
| | | | | Aromatic Carbony Compound | non-disclosure | 0.0009 | 0.21 |
| | | | | Amine Compound | non-disclosure | 0.0001 | 0.03 |
| | | | | Levelling Agents & Others | non-disclosure | 0.0006 | 0.13 |
| | | | | Dipropylene Glyco Monomethy Ether | 34590948 | 0.0033 | 0.77 |
| | | | | 3-Methoxy-3-Methyl Butyl-Acetate | non-disclosure | 0.0051 | 1.19 |
| | | | | High Bopling Point Petroleum Solvent | non-disclosure | 0.0009 | 0.20 |
| | | | | Acrylic Monomer | non-disclosure | 0.0014 | 0.33 |
| | | | | Epoxy Resin | 85954-11-6 | 0.0048 | 1.12 |
| | | | | Organic Filler | non-disclosure | 0.0005 | 0.11 |
| | | | | Continuos Filament Fiber Glass | 65997-17-3 | 0.0527 | 12.24 |
| | | | | Copper | 7440-50-8 | 0.2340 | 54.35 |
| | | | | Bismaleimide/Triazine | 105391-33-1 /25722-66-1 | 0.0220 | 5.10 |
| | | | | Epoxy Resin | 9003-36-5 | 0.0220 | 5.10 |
| | | | | Inorganic Filler | 21645-51-2 | 0.0404 | 9.38 |
| | | | | Triazine | 25722-66-1 | 0.0211 | 4.89 |
| 2 | Solder Paste | Alloy | 0.03625 | Nickel Plating | 7440-02-0 | 0.0018 | 0.41 |
| | | | | Soft Gold | 7440-57-5 | 0.0004 | 0.09 |
| | | | | Sn | 7440-31-5 | 0.0344 | 95.00 |
| 3 | Epoxy | | 0.00117 | Sb | 7440-36-0 | 0.0018 | 5.00 |
| | | | | Di-ester resin | non-disclosure | 0.0001 | 8.00 |
| | | | | Functionalized ester | non-disclosure | 0.0001 | 8.00 |
| 4 | Passive Components | Resistor | 0.01481 | Silver | 7440-22-4 | 0.0010 | 84.00 |
| | | | | Conductor/Resistor Glass | non-disclosure | 0.0004 | 2.58 |
| | | | | Epoxy | non-disclosure | 0.0002 | 1.31 |
| | | | | Nickel (Ni) | 7440-02-0 | 0.0004 | 2.55 |
| | | | | Tin (Sn) | 7440-31-5 | 0.0003 | 2.02 |
| 5 | Passive | Capacitor | 0.00078 | Ceramic (Oxides) | 1344-28-1 | 0.0136 | 91.54 |
| | | | | Copper (Cu) | 7440-50-8 | 0.0002 | 32.00 |

| No. | Part Name | Material Name | Component Weight (gram) | Materials Analysis (element) | CAS Number | Material Mass (gram) | Materials Analysis (weight %) |
|----------------------|--------------------|---------------|-------------------------|------------------------------|----------------|----------------------|-------------------------------|
| | Components | | | Nickel (Ni) | 7440-02-0 | 0.0001 | 8.00 |
| | | | | Tin (Sn) | 7440-31-5 | 0.0000 | 2.40 |
| | | | | Ceramic (Ba) Compounds | 12047-27-7 | 0.0004 | 57.60 |
| 6 | Passive Components | inductor | 0.11986 | Iron Powder (Fe) | 7439-89-6 | 0.0963 | 80.38 |
| | | | | Copper (Cu) | 7440-50-8 | 0.0227 | 18.91 |
| | | | | Nickel (Ni) | 7440-02-0 | 0.0001 | 0.10 |
| | | | | Tin (Sn) | 7440-31-5 | 0.0007 | 0.62 |
| 7 | Active Components | LTC-QFN | 0.03640 | MDS attached | - | 0.0364 | 100.00 |
| 8 | Active Ics | Silicon | 0.00664 | Silicon | 7440-21-3 | 0.0066 | 100.00 |
| 9 | Wire | Gold | 0.00237 | Au | 7440-57-5 | 0.0024 | 99.99 |
| 10 | Encapsulation | Epoxy Resin | 1.53236 | Fused Silica | 60676-86-0 | 1.1830 | 77.20 |
| | | | | Epoxy Resin | non-disclosure | 0.1364 | 8.90 |
| | | | | Phenol Resin | non-disclosure | 0.1364 | 8.90 |
| | | | | Crytalline Silica | 14808-60-7 | 0.0460 | 3.00 |
| | | | | Carbon Black | 1333-86-4 | 0.0077 | 0.50 |
| | | | | Metal Hydroxide | non-disclosure | 0.0230 | 1.50 |
| Total Package Weight | | | 2.18 | | | | |

Note: Composition derived from MSDS and material C of C from Vendors. Component Weight based on assembly of generic part

* MDS for LTC-QFN is attached on Page 2

LINEAR TECHNOLOGY MATERIALS DECLARATION

LT5575EUF

(Engineering Calculation)

QFN 4mm X 4mm Exp. Pad

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TOTAL MASS (g): 0.0364019982517

| COMPONENT MATERIAL | VENDOR/ INDUSTRY NAMES | CONSTITUENT NAME | CAS NUMBER | CONSTITUENT MASS (g) | CONSTITUENT (PPM) OF MATERIAL | CONSTITUENT (PPM) OF TOTAL PKG. |
|---------------------|----------------------------------|---------------------------|------------|----------------------|-------------------------------|---------------------------------|
| Active Device | Linear Technology | Silicon (Si) | 7440-21-3 | 0.001077 | 1000000 | 29586 |
| Die Coat | Dow Corning | Silicone | 69430-27-9 | 0.000000 | 0 | 0 |
| Lead Frame | Cu | Copper (Cu) | 7440-50-8 | 0.012129 | 975000 | 333196 |
| | | Iron (Fe) | 7439-89-6 | 0.000299 | 24000 | 8214 |
| | | Phosphorus (P) | 7723-14-0 | 0.000004 | 300 | 110 |
| | | Zinc (Zn) | 7440-66-6 | 0.000009 | 700 | 247 |
| | | Nickel (Ni) | 7440-02-0 | 0.000000 | 0 | 0 |
| | | Silicon (Si) | 7440-21-3 | 0.000000 | 0 | 0 |
| | | Magnesium (Mg) | 7439-95-4 | 0.000000 | 0 | 0 |
| | | Tin (Sn) | 7440-31-5 | 0.000000 | 0 | 0 |
| | | Lead Frame Total: | | 0.012441 | 1000000 | 341767 |
| Plating | PMI | Exter. Plating Pb | 7439-92-1 | 0.000092 | 150082 | 2527 |
| | | Exter. Plating Sn | 7440-31-5 | 0.000521 | 849918 | 849918 |
| | | External Plating Total: | | 0.000613 | 1000000 | 16839 |
| | | Inter. Plating Ni | 7440-02-0 | 0.000000 | 0 | 0 |
| | | Inter. Plating Ag | 7440-22-4 | 0.000278 | 1000000 | 7637 |
| | | Internal Plating Total: | | 0.000278 | 1000000 | 7637 |
| Die Attach | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag) | 7440-22-4 | 0.000618 | 750000 | 16977 |
| | | Tin (Sn) | 7440-31-5 | 0.000000 | 0 | 0 |
| | | Lead (Pb) | 7439-92-1 | 0.000000 | 0 | 0 |
| | | Silica (SiO2) | 60676-86-0 | 0.000000 | 0 | 0 |
| | | Indium (In) | 7440-74-6 | 0.000000 | 0 | 0 |
| | | Metal Oxide | | 0.000000 | 0 | 0 |
| | | Antimony (Sb) | 7440-36-0 | 0.000000 | 0 | 0 |
| | | Resin (EP) | | 0.000206 | 250000 | 5659 |
| | | Die Attach Total: | | 0.000824 | 1000000 | 22636 |
| Encapsulation | MULTI-AROMATIC RESIN Br/Sb FREE | Resin (EP) | | 0.002739 | 130000 | 75243 |
| | | Bromine (Br) | 40039-93-8 | 0.000000 | 0 | 0 |
| | | Silica (SiO2) | 60676-86-0 | 0.018120 | 860000 | 497775 |
| | | Antimony Trioxide (Sb2O3) | 1309-64-4 | 0.000000 | 0 | 0 |
| | | Metal Hydroxide | | 0.000000 | 0 | 0 |
| | | Carbon Black (C) | 1333-86-4 | 0.000211 | 10000 | 5796 |
| | | Encapsulation Total: | | 0.021070 | 1000000 | 578814 |
| Bond Wire Estimated | AFW/TANAKA/ Kn | Gold (Au) | 7440-57-5 | 0.000099 | 1000000 | 2720 |

TOTAL MASS (g): 0.036402